Remarks

The Examiner has rejected Claims 6-10 under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 6 has been amended to overcome this rejection. Entry of the amendment, and favorable consideration thereof, is earnestly requested.

The Examiner has rejected Claims 1, 2, 4, 12 and 14 under 35 U.S.C. 102(b) as being anticipated by WO 99/37010 to Kapaan et al. The Examiner has rejected Claims 1, 2, 4, 11 and 13 under 35 U.S.C. 102(b) as being anticipated by WO 99/06725 to Heinlein et al. The Examiner has rejected Claims 1, 2, 4, 11 and 13 under 35 U.S.C. 102(b) as being anticipated by WO 99/45292 to Rieth et al. (US 6,405,836 is the English language equivalent.) The Examiner has also rejected Claims 3 and 5-7 under 35 U.S.C. 103(a) as being unpatentable over WO 99/45292 to Rieth et al. Claims 1 and 13 have been amended to overcome these rejections.

Claims 1 and 13 have been amended include the limitation from Claim 2 that the house is mounted to be substantially unloaded during braking and also to more clearly define the position of at least a part of the house as between and outside the frame and the cover. No new matter is added by the amendments to Claims 1 and 13. Entry of the Amendments, and favorable consideration thereof is earnestly requested.

The patent to Kapaan et al discloses a disc brake having a brake caliper including a claw piece. (p. 3, ll. 34-35). Kapaan also discloses a screw mechanism module 2, a drive module 3, a reduction gear module 63 or sub-assemblies thereof, which can be pre-assembled into a sealed and lubricated actuating unit and fitted in the brake caliper. (p. 4, ll. 3-5). The drive module 5 (or motor 5, see p. 3, l. 36) is mounted from the opposite side, directly to the claw piece 1. (p. 4, ll. 25-28).

Reduction gear module 63 is disclosed by Kapaan as a part of the brake mechanism, and thus cannot be considered a house for a brake mechanism.

Therefore, Applicant respectfully submits that the Kapaan reference does not disclose a house for a brake mechanism.

Further, even if gear module 63 could be considered a house as suggested by the Examiner, the Kapaan reference does not disclose a brake where at least a part of the house is positioned between and outside the frame and the cover as required by amended Claims 1 and 13. Assuming Kapaan structure 5 is analogous to the cover in the present invention, any structure disclosed in Kapaan, including gear module 63, which could be considered a house for a service brake mechanism would not have at least a part of the house positioned between and outside the frame or claw piece and the cover, but rather would be contained within the frame and cover.

Alternatively, assuming structure 5 is the house, there is no disclosure, suggestion or teaching to add a cover element to the Kapaan brake caliper. The Kapaan disclosure is meant to operate without any additional covers. Applicant respectfully submits that the rejection under Kapaan is overcome.

The patent to Heinlein et al discloses a brake housing 1 having a main body section 7 which is bolted to a bridge section 9 forming a cavity or recess 11 within which a brake actuator mechanism 13 is located. (p. 16, first paragraph). Load bearing surfaces 93 are located in recesses 109 of the bottom face of cavity 11 in the brake housing 1. (p. 24, second paragraph). Thus, main body section 7, which forms the bottom face of cavity 11 in the brake housing 1, is load bearing during braking.

Therefore, the Heinlein reference does not disclose a house for a service brake mechanism mounted to be substantially unloaded during braking as required by amended Claims 1 and 13. Assuming a pneumatic actuator is analogous to the cover in the present invention, Heinlein discloses that main body section 7 of the brake housing 1 bears load during braking by providing recess 109 for bearing surface components 93 for operation of the brake.

Alternatively, assuming that main body section 7 is the cover, Heinlein discloses, teaches or suggestions no structure which could serve as a house for the brake

mechanism where at least part of the house is positioned between and outside the frame and the cover. Rather, any such house would be contained within the frame and cover. Applicant respectfully submits that the rejection under Heinlein is overcome.

The patent to Rieth et al discloses an actuating unit fitted to a brake caliper (shown only schematically in the figures). (col. 5, ll. 16-17). The actuating unit has a modular design composed of a drive unit 1, a first reduction gear 2, and a second reduction gear 3. (col. 5, ll. 17-23). Drive unit 1 comprises an electric motor 11 housed in motor housing 12. Where gear housing 19 is formed as part of the brake caliper, and assuming that motor housing 12 is analogous the house of the present invention, the Rieth reference does not disclose, teach or suggest a cover such that at least part of the house is positioned between and outside the frame and the cover as required by amended Claims 1 and 13, as Rieth does not disclose, teach or suggest any particular design for a brake caliper.

If the Rieth disclosure were combined with a caliper design having a cover such as the main body section that Heinlein discloses, the result would be the same as Heinlein. At least part of the house for the brake mechanism would not be positioned between and outside the frame and the cover, but rather it would be contained within the frame and cover. Another possible caliper design which could be combined with the Rieth reference is also taken from the Heinlein reference. The main body section and the bridge may be integrally cast as a unitary construction. (p. 16, first paragraph). In such a case, there would be no cover, as the cover element would be eliminated as part of the caliper design.

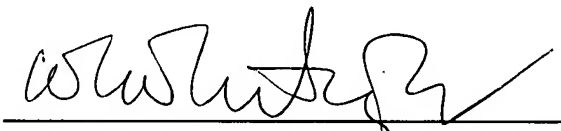
Alternatively, assuming that motor housing 12 is analogous to the cover in the present invention, at least part of any other structure disclosed in Rieth which could be considered a house for a service brake mechanism would not be positioned between and outside the frame and the cover, but again, would be contained within the frame and cover. Also, such a brake would be inoperable, because there would be no rear load bearing surface. Applicant respectfully submits that the rejection under Rieth is overcome.

Claim 14 has been amended to add the limitation from Claim 10 that the house is pre-tensioned by means of the pull rods. None of the cited references disclose, teach or suggest a disc brake where a number of pull rods clamp between the frame and the cover without passing through the house so that the house is pre-tensioned by means of the pull rods as required by amended Claim 14. Entry of the amendment, and favorable consideration thereof, is earnestly requested.

Finally, Applicant acknowledges that the Examiner indicated that Claims 8-10 would each be allowable if rewritten in independent form. Applicant has added new independent Claim 15, which incorporates the language of Claims 1, 2, 3, 5, 6, 7 and Claim 8 as drafted prior to this preliminary amendment. Applicant has also added new Claim 16, which incorporates the language of Claim 9 and is dependent on new Claim 15 and has added new Claim 17, which incorporates the language of Claim 10 and is dependent on new Claim 16. Entry of the new claims, and favorable consideration thereof, is earnestly requested. Applicant respectfully submits that newly added Claims 15-17 are in condition for allowance.

Entry of the amendments, and favorable consideration thereof, and of all the Claims, Claims 1-17, is earnestly requested.

Respectfully submitted,



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